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## ABSTRACT

10 The composite electrolyte for use in a thin plate rechargeable lithium battery comprises a porous or micro-porous inert, multi-layered polymer separator laminate which carries an adherent second polymer coating containing a dissociable lithium compound, and the multi-layered separator having adherent solid second polymer layer, is impregnated with an organic liquid containing another lithium salt. The porous or micro-porous separator laminate is made of multiple polymer layers, at least one of the member layers having melting  
15 temperature at least 20-C below the melting temperature of the other polymer member layers. The composite porous electrolyte is inserted between the electrodes of a rechargeable lithium battery. In another embodiment the porous polymer separator sheet has an adherent, dissociable lithium compound containing, solid second polymer layer on each of its major faces.

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